

**REMARKS**

Claims 3-4 and 9-11 are pending in this application. By the Office Action, claims 1-4 are rejected and non-elected claims 5-8 are withdrawn from consideration. By this Amendment, the specification is amended, claims 3 and 4 are amended, claims 1-2 and 5-8 are canceled, and claims 9-11 are added. The amendments to the specification correct typographical errors and informalities. Support for the amendments can be found in the Figures, the specification at least in paragraphs [0023], [0035], and [0046], and in the original claims as filed. Thus, no new matter is added. In view of the amendments and the following remarks, reconsideration and allowance are respectfully requested.

**I. Rejection under §102****A. Brandle**

The Office Action rejects claims 1-4 under 35 U.S.C. §102(e) over U.S. Patent No. 6,492,011 to Brandle et al. ("Brandle"). Applicant respectfully traverses the rejection.

Claim 1 and 2 are canceled and amended claims 3-4 now depend from new claim 9. Claim 9 is directed to a hard multilayer coating to cover a base material, the hard multilayer coating comprising at least one first coating layer and at least one second coating layer that are alternately superposed on each other, wherein each of the at least one first coating layer consists of  $(Ti_x Al_{1-x}) (C_y N_{1-y})$  wherein  $0.20 \leq x \leq 0.60$ ,  $0 \leq y \leq 0.5$ , each of the at least one second coating layer includes or consists of CrN, the at least one first coating layer consists of a plurality of first coating layers, and one of the plurality of first coating layers constitutes an outermost layer of the multilayer coating, while another of the plurality of first coating layers constitutes an innermost layer of the hard multilayer coating so that the another of the plurality of first coating layer is held in contact with the base material. Brandle does not teach this type of multilayer coating.

Brandle describes a coating including a first coating layer (5) (i.e., hard material layer) and a second coating layer (3) (intermediate layer) (see, Tables 1.1.3, 1.2.4 and 2.4). The first coating layer (5) constitutes an outermost layer of the coating. Thus, Brandle does not teach that the first coating layer (5) constitutes an innermost layer of the coating. Accordingly, in contrast to claim 9, the first coating layer in Brandle is not held in contact with the base material (1) as recited in claim 9. Moreover, in the Brandle coating, the innermost layer is constituted by the second coating layer (3) having a relatively low degree of hardness, rather than by the first coating layer (5) having a relatively high degree of hardness. In contrast to Brandle, the claimed multilayer coating includes an innermost layer that is constituted by one of the first coating layers having a relatively high degree of hardness.

Brandle does not teach a multilayer coating having each and every element of the coating as claimed. Thus, Brandle does not anticipate claim 9 and claims 3, 4 and 10 dependent thereon. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection.

**B. Balzers**

The Office Action rejects claims 1-4 under 35 U.S.C. §102(b) over JP 10-168583 to Balzers ("Balzers"). Applicant respectfully traverses the rejection.

Balzers discloses a coating that includes a first coating layer and a second coating layer. However, like Brandle, Balzers also fails to teach that the first coating layer constitutes an innermost layer of the coating. In Balzer, the relatively soft second coating layer is interposed between the relatively hard first coating layer and the base material, reportedly in the interest of absorbing a high compression stress of the relatively hard first coating layer. Thus, the first coating layer in Balzer is not held in contact with the base material as claimed.

For at least these reasons, Balzer does not teach a multilayer coating having each and every element as claimed. Balzer does not anticipate claim 9 and claims 3, 4 and 10

dependent thereon. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection.

**C. New claim 11**

New claim 11 is directed to a hard multilayer coating comprising at least one first coating layer and at least one second coating layer wherein each of said at least one second coating layer includes CrN and  $(\text{Ti}_x \text{Al}_{1-x}) (\text{C}_y \text{N}_{1-y})$  wherein  $0.20 \leq x \leq 0.60$ ,  $0 \leq y \leq 0.5$ . The claimed coating is distinguished over Brandle and Balzers for at least the reason that neither reference teaches or suggest that the coating includes CrN and  $(\text{Ti}_x \text{Al}_{1-x}) (\text{C}_y \text{N}_{1-y})$  wherein  $0.20 \leq x \leq 0.60$ ,  $0 \leq y \leq 0.5$ .

**II. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 3-4 and 9-11 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



James A. Oliff  
Registration No. 27,075

H. James Voeller  
Registration No. 48,015

JAO:HJV/hjv

Date: September 16, 2003

**OLIFF & BERRIDGE, PLC**  
**P.O. Box 19928**  
**Alexandria, Virginia 22320**  
**Telephone: (703) 836-6400**

**DEPOSIT ACCOUNT USE  
AUTHORIZATION**

Please grant any extension  
necessary for entry;  
Charge any fee due to our  
Deposit Account No. 15-0461